



**Claims as Allowed in Application No. 10/240,993**

1. An antimicrobial and antiviral polymeric material, comprising  
a polymer selected from the group consisting of polyamide, polyester, and polypropylene,  
and  
a single anti-microbial and anti-viral component consisting essentially of microscopic  
water insoluble particles of copper oxide incorporated in the polymer,  
wherein a portion of said particles in said polymer are exposed and protruding from the  
surface of the material,  
and wherein said particles release  $\text{Cu}^{++}$  when exposed to water or water vapor.
2. An antimicrobial and antiviral polymeric material according to claim 1, wherein said  
polymeric material is a film.
3. An antimicrobial and antiviral polymeric material according to claim 1, wherein said  
polymeric material is a fiber.
4. An antimicrobial and antiviral polymeric material according to claim 1, wherein said  
polymeric material is a yarn.
5. An antimicrobial and antiviral polymeric material according to claim 1, wherein said  
particles are of a size of between 1 and 10 microns.
6. An antimicrobial and antiviral polymeric material according to claim 1, wherein said  
particles are present in an amount of between 0.25 and 10% of the polymer weight.
7. A wrapping material comprising an antimicrobial polymeric material according to claim  
1.
8. A condom comprising an antiviral polymeric material, said material comprising

**Claims as Allowed in Application No. 10/240,993**

a polymer selected from the group consisting of polyamide, polyester, and polypropylene, and a single anti-microbial and anti-viral component consisting essentially of microscopic water insoluble particles of copper oxide incorporated in the polymer,

wherein a portion of said particles in said polymer are exposed and protruding from the surface of the material,

and wherein said particles release  $\text{Cu}^{++}$  when exposed to water or water vapor.

12. An antimicrobial and antiviral polymeric material according to claim 1, wherein the particles are of a size of between 1 and 10 microns and are present in an amount of between 0.25 and 10% of the polymer weight.

14. An antimicrobial and antiviral polymeric material according to claim 3, wherein the fiber is bi-component or multi-component.

15. The antimicrobial and antiviral polymeric material of claim 1, wherein said microscopic water insoluble particles of copper oxide consist of cupric oxide particles and cuprous oxide particles.

16. The antimicrobial and antiviral polymeric material according to claim 15, wherein said polymeric material is a film.

17. The antimicrobial and antiviral polymeric material according to claim 15, wherein said polymeric material is a fiber.

18. The antimicrobial and antiviral polymeric material according to claim 15, wherein said polymeric material is a yarn.

19. The antimicrobial and antiviral polymeric material according to claim 15, wherein said particles are of a size of between 1 and 10 microns.

**Claims as Allowed in Application No. 10/240,993**

20. The antimicrobial and antiviral polymeric material according to claim 15, wherein said particles are present in an amount of between 0.25 and 10% of the polymer weight.
21. A wrapping material comprising an antimicrobial polymeric material according to claim 15.
22. A condom comprising an antiviral polymeric material of claim 15.
23. An antimicrobial and antiviral polymeric material according to claim 15, wherein said particles are of a size of between 1 and 10 microns and are present in an amount of between 0.25 and 10% of the polymer weight.
27. A glove comprising an antiviral polymeric material according to claim 1.
28. Surgical tubing comprising an antiviral polymeric material according to claim 1.
29. The glove of claim 27 wherein said microscopic water insoluble particles of copper oxide comprise cupric oxide particles and cuprous oxide particles.
30. The surgical tube of claim 28 wherein said microscopic water insoluble particles of copper oxide comprise cupric oxide particles and cuprous oxide particles.
32. An antimicrobial and antiviral polymeric material according to claim 1, wherein said polymer is polypropylene.
33. An antimicrobial and antiviral polymeric material according to claim 1, wherein said polymer is polyamide.
34. An antimicrobial and antiviral polymeric material according to claim 1, wherein said polymer is polyester.

**Claims as Allowed in Application No. 10/240,993**

35. A glove comprising the antimicrobial and antiviral polymeric material of claim 5.
36. A surgical tube comprising the antimicrobial and antiviral polymeric material of claim 5.
37. A glove comprising the antimicrobial and antiviral polymeric material of claim 15.
38. A surgical tube comprising the antimicrobial and antiviral polymeric material of claim 15.
39. An antimicrobial and antiviral polymeric material, consisting essentially of a polymer selected from the group consisting of polyamide, polyester, and polypropylene, and a single antimicrobial and anti-viral component consisting essentially of microscopic water insoluble particles of copper oxide incorporated in the polymer, wherein a portion of said particles in said polymer are exposed and protruding from the surface of the material, and wherein said particles release  $\text{Cu}^{++}$  when exposed to water or water vapor.
40. The polymeric material of claim 39, wherein said polymer is polypropylene.
41. The polymeric material of claim 39, wherein said polymer is polyamide.
42. The polymeric material of claim 39, wherein said polymer is polyester.